


PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Article 36 and Rule 70)

Applicant's or agent's file reference 11991/WO/00	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/IL02/00143	International filing date (day/month/year) 25.02.2002	Priority date (day/month/year) 05.04.2001
International Patent Classification (IPC) or both national classification and IPC G11B20/00		
Applicant HEXALOCK LTD. ET AL.		
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 4 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of 2 sheets.</p>		
<p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> I <input checked="" type="checkbox"/> Basis of the opinion II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application 		
Date of submission of the demand 22.10.2002	Date of completion of this report 25.09.2003	
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Ogor, M Telephone No. +31 70 340-4458	



**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/IL02/00143**

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17):*

Description, Pages

1-17 as originally filed

Claims, Numbers

2-16 filed with telefax on 17.07.2003

1 filed with telefax on 28.08.2003

Drawings, Sheets

1-6 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)),
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-17
	No: Claims	
Inventive step (IS)	Yes: Claims	1-17
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-17
	No: Claims	

2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/IL02/00143

Re Item V

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following document:

D1: EP-A-0 770 957

1) Document D1, which is regarded as being the closest prior art to the subject-matter of claim 1, discloses a method for protecting digital data, comprising the providing of a plurality of challenging mines (page 3, lines 27-35: verifier procedure call instructions 130-A and 130-B) dispersed within an executable program file (figure 1: application modules A and B), performance of the program file involves overcoming said mines (page 5, lines 47-54) by validation of a validation key located in at least one other mine (page 4, line 57- page 5 line 6).

The subject-matter of newly submitted claim 1 differs from D1 in the providing of protection against illegal copying and in the performance of the program being also dependent on at least one additional key.

The subject-matter of claim 1 is therefore new and meets the requirements of Article 33(2) PCT.

2) The problem to be solved by the present invention may therefore be regarded as providing protection against possible attempts at copying by hackers.

Neither the problem, nor the usage of encryption of the challenging mines with a combination of keys to solve the problem, are addressed in D1. Therefore the subject-matter of newly submitted claim 1 involves an inventive step (Article 33(3) PCT).

3) Newly submitted claims 2-15 are dependent on newly submitted claim 1, and as such also meet the requirements of Article 33(2) and (3) PCT.

4) The amendment "the digital data comprise [...] databases and archives or Internet files" in claim 16 introduces subject-matter which extends beyond the content of the application as filed. Nowhere in the description is there any mention of such files. As a consequence claim 16 does not meet Article 34(2)(b) PCT and as such is not considered to be allowable.

CLAIMS

1. A method for protecting digital data from illegal copying and preventing unauthorized use, characterized by providing a plurality of challenging mines dispersed within an executable program file, performance of the program file involves overcoming said mines by validation of a validation key located in at least one other mine, and the program performance also depends on validation of at least one of the following additional keys: a signature key stored on a media and accessible by standard devices for read-only; a content key stored on the media storing the data; or an authentication key stored in some type of media remote from the one in use
2. A method according to claim 1, wherein the mines are concealed within the executable program file.
3. A method according to claim 2, wherein the mines are concealed within the executable program file by means of being encrypted.
4. A method according to claim 1, wherein a portion of the executable program file is encrypted within the location of a mine.
5. A method according to claim 1, wherein the mines are encrypted.
6. A method according to claim 4, wherein the proper operation/use of said portion of executable program file is possible only when properly decrypting it using a validation, authentication, or signature key, or a combination thereof, as a decrypting key.
7. A method according to claim 1, wherein the mines are encrypted using a validation, authentication, or signature key, or a combination thereof.
8. A method according to claim 1, wherein the digital data is encrypted by means of content keys.
9. A method according to claim 8, wherein the proper use of the digital data protected by a mine is possible only when finding a corresponding content key for decrypting said data.
10. A method according to claim 1, wherein the proper use of a portion of the executable program file that is protected by a mine further depends on

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the existence of an authentication key on a medium of the provider of the software, accessible via the Internet.

11. A method according to claim 1, wherein the effecting of the mines within the executable program file involves two steps: designating and arming.

12. A method according to claim 11, wherein the designating and arming steps are carried out by two separate entities.

13. A method according to claim 12, wherein the designating step is carried out by the author/producer of the data.

14. A method according to claim 12, wherein the arming step is carried out by a data protecting professional.

15. A method according to claim 1, wherein dependence between mines is carried out by means of relative addressing.

16. A method according to claim 1, wherein the digital data comprise image, video, music, databases and archives, or internet files.

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